

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

1. Authorization for this examiner's amendment was given in a telephone interview with Ms. Elizabeth Zehr on 3/13/09.

The application has been amended as follows:

- a. Cancel claims 2, 3, 18 – 21 and 23; and
- b. Replace claims 1, 4, 5, 7-13, 15, 25, 31-33, 35 and 40 with the following:
  1. Interfaces, stored on one or more computer-readable storage media, to be called on kernel transaction management objects, comprising:  
application program interfaces (APIs) local with the transaction manager located in a kernel to implement operations in the kernel on a kernel transaction object (TX), the TX representing a transaction and being accessible by at least one process participating in the transaction, the APIs to implement operations in the kernel on the TX including:

a CreateTransaction API to create a new TX and return a handle to the new TX, wherein if the handle of the new TX closes without requesting that the TX be committed, then the transaction implicitly rolls back;

the APIs local with the transaction manager to implement kernel-level operations on a kernel resource management object (RMO), the RMO representing a relationship between a TX associated with the transaction manager and at least one resource that participates in the transaction, the resource capable of storing data in a durable state; and

the APIs local with the transaction manager to implement kernel-level operations on a kernel enlistment (EN) object, the EN representing a relationship between a resource manager and the transaction, wherein each of the APIs to implement operations on the TX, the RMO, and the EN utilize handles to refer to objects, wherein each of the handles is an opaque reference to a unique object.

4. Interfaces according to Claim 1, wherein at least one of the APIs calls for the TX to transmit pre-prepare messages to resource managers associated with a transaction.

5. Interfaces according to Claim 1, wherein at least one of the APIs calls for the TX to transmit a prepare request to resource managers enlisted in a transaction.

7. Interfaces according to Claim 1, wherein the APIs to implement operations in the kernel on the TX further include an API to call for the TX to be opened for a transaction.

8. Interfaces according to Claim 1, wherein the APIs to implement operations in the kernel on the TX further include an API to call at least for the TX to commit a transaction.

9. Interfaces according to Claim 1, wherein the APIs to implement operations in the kernel on the TX further include an API to call for the TX to abort a transaction.

10. Interfaces according to Claim 1, wherein the APIs to implement operations in the kernel on the TX further include an API to save a current state of the transaction.

11. Interfaces according to Claim 1, wherein the APIs to implement operations in the kernel on the TX further include an API TX to retrieve information about the TX for a requestor.

12. Interfaces according to Claim 1, wherein the APIs to implement operations in the kernel on the TX further include an API to call for the TX to set information.

13. Interfaces according to Claim 1, wherein at least one of the APIs calls for the TX to close.

15. Interfaces according to Claim 1, wherein at least one of the APIs calls for a new RMO to be created.

25. Interfaces according to Claim 1, wherein at least one of the APIs is to implement operations on the TX by the RMO.

31. Interfaces according to Claim 1, wherein at least one of the APIs calls for a resource manager to be registered as a communications resource manager for a particular protocol.

32. Interfaces according to Claim 1, wherein at least one of the APIs calls for a representation of a transaction to be serialized into a buffer.

33. Interfaces according to Claim 1, wherein at least one of the APIs calls for information representing registered protocols to be serialized into a buffer.

35. Interfaces according to Claim 1, wherein at least one of the APIs calls for a transaction to be propagated to a destination using push-style propagation.

40. A system comprising:

a computer with a processor configured to implement a transaction, the computer comprising:

a kernel transaction object (TX) to represent a transaction, the TX accessible by at least one process participating in the transaction;

a kernel resource manager object (RMO) to represent a relationship between a TX associated with the transaction manager and at least one resource that participates in the transaction, the resource capable of storing data in a durable state; and

a kernel enlistment object (EN) to represent a relationship between a resource manager and the transaction, wherein two-phase commit processing is executed at the kernel-level by calling application program interfaces (APIs) on the TX, the RMO, and the EN, the APIs local with the transaction manager, the transaction manager located in a kernel of an operating system, the APIs called on the TX including an API to create a new TX and return a handle to the new TX, wherein if the handle of the new TX closes without requesting that the TX be committed, then the transaction implicitly rolls back, further wherein each of the APIs to implement operations on the TX, the RMO, and the EN utilize handles to refer to objects, wherein each of the handles is an opaque reference to a unique object.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES E. ANYA whose telephone number is (571)272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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cea.

/Li B. Zhen/  
Primary Examiner, Art Unit 2194